Maine Statewide Health Information Technology and Exchange Strategic and Operational Plan – May 2013 Update

A Strategy to Create an Infrastructure that Preserves and Improves the Health of Maine People

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Maine Strategic and Operational Plan (SOP) Update 2013

Introduction

The State of Maine has made significant progress centered around Maine's HIT/HIE vision:

Preserving and improving the health of Maine people requires a transformed patient centered health system that uses highly secure, integrated electronic health information systems to advance access, safety, quality, and cost efficiency in the care of individual patients and populations.

Maine HIT and HIE Strategic Goals

To advance this vision, the State has continued to convene a broad group of stakeholders –The HIT Steering Committee (HITSC) – to consistently hear from stakeholders and adjust the SOP according to the needs of the state and communities. The HITSC has used these three goals and eight objectives to guide their input into implementation activities.

GOAL 1: By 2015, all people in Maine will be cared for by healthcare providers who share electronic health and health related information securely within a connected healthcare system using standards-based technologies that promote high quality individual and population health.

GOAL 2: By 2015, all people in Maine will have access to a flexible comprehensive consumer centric life-long health record – "One Person One Record"

GOAL 3: Electronic healthcare information will be used by the State Coordinator for Health Information Technology to develop appropriate public and private policies throughout the healthcare system to promote evidenced based, clinically effective, and efficient care for all people.

Maine HIT Strategic Objectives

1. *Enable the transformation:* In adherence to federal guidelines for meaningful use of HIT, by 2015, all providers in Maine will have an EHR pursuant to National Standards and will be sharing clinical and administrative information through HealthInfoNet, the statewide health information exchange organization, to promote high quality and cost effective healthcare.

2. *Security and Privacy:* All healthcare information shared and stored electronically will adhere to strict privacy, security, and confidentiality requirements as defined by the collaborative work of HealthInfoNet (HIN), the State Government (including the Attorney General) and where possible the guidelines provided through the Office of the National Coordinator for HIT (ONC) and other federally supported projects.

3. *Patient focused health:* By 2015 all people of Maine will have secure electronic access to comprehensive healthcare information and will be assured that if they consent to participate in HIE, their providers will also have comprehensive access to their clinical information to guarantee the most informed decision making at the point of care.

4. ***Improve the quality of care:*** By 2015, all providers serving individuals and populations in Maine will achieve federal meaningful use guidelines, improve performance, and support care processes on key health system outcomes measures.

5. ***Coordination of care:*** Beginning in 2010 and phased in through 2015, the statewide health information organization, HealthInfoNet (HIN), will deploy statewide health information exchange services, connecting all providers, payers, laboratories, imaging centers, pharmacies, public agencies and other relevant stakeholders. These services will allow for the appropriate, secure, and private exchange of relevant personal health information to the point of care for all Maine people consenting to participate, assuring that their healthcare is coordinated among all primary care and specialty providers.

6. ***Benefit public and population health:*** HIE activities in Maine will be aligned at every level possible through the Office of the State Coordinator for HIT (OSC) to assure that the data collected, is used to improve population health. Statewide HIE services are critical for required disease reporting, biosurveillance, public health tracking (immunization etc.), as well as population support functions of the Maine Centers for Disease Control (MECDC).

7. ***Promote public private cooperation and collaboration:*** All health information technology and exchange activities will be developed and overseen through structures that promote cooperation and collaboration among all public and private stakeholders, building upon existing partnerships developed throughout the history of HIE in Maine and in recognition of the specific public sector regulatory, accountability and fiscal functions.

8. ***Promote efficiency and effectiveness of healthcare delivery:*** Recognizing that HIT and HIE are tools, evaluation metrics will be iteratively developed and promulgated across the healthcare system of Maine to assure that HIT tools are used appropriately to the benefit the people of Maine.

MaineCare's HIT Vision Aligned with Department Vision

Both the ONC and Maine OSC's vision and goals serve as a critical foundation for MaineCare's vision for the future of HIT and the EHR Incentive Program. MaineCare's HIT vision must not only represent the needs and requirements for the EHR Incentive Program, it needs to make the connection between HIT and its effective use for the exchange of health information to deliver health care system improvements across the Nation, the State and for all of MaineCare's Members. To complete this circle, it is important for the MaineCare vision to reflect the Maine DHHS vision and mission:

Vision: Maine people living safe, healthy, and productive lives
Mission: Provide integrated health and human services to the people of Maine to assist individuals in meeting their needs, while respecting the rights and preferences of the individual and family, within available resources.

In addition, since information technology is key to HIT, MaineCare's HIT vision must also consider DHHS' OIT objectives for designing new applications and enhancements to existing applications:

(1) DHHS services are client-centered and enable common information to be shared (2) Operating costs are reduced by eliminating duplication of business functions and data and their associated maintenance efforts (3) Management of confidential and privileged data is enhanced by instituting standardized controls that limit access to authorized individuals and maintain audit trails of access and changes.

To recap, MaineCare's HIT vision is intrinsically linked to the National ONC and State OSC goals and reflects the vision of Maine's DHHS and OIT. To meet this accomplishment, a significant amount of feedback and discussion went into the creation of MaineCare's HIT vision. Visioning sessions to develop the "To-Be" HIT Landscape were conducted to provide DHHS with an understanding of the common vision of how the State's Medicaid's EHR Incentive Payment Program will operate in concert with the larger statewide health care system. Four stakeholder groups were involved in the visioning session including DHHS Program Directors, MaineCare Members, MaineCare providers, OIT, broadband representatives, provider groups, advocates and others. MaineCare developed its vision in alignment with the HIT visions of the Office of the National Coordinator (ONC), the Office of the State Coordinator (OSC), and DHHS. As a result of the collaborative efforts, MaineCare's vision was framed:

A Medicaid program that employs secure electronic health information technology to provide truly integrated, efficient, and high quality health care to MaineCare Members and to improve health outcomes.

In keeping with CMS requirements, guidelines and goals for the HIT program, and the extensive work performed for MaineCare's "To-Be" Landscape, these goals and objectives for the next five years were developed.

Goal 1. HIT Initiative Coordination · Recognizing the benefits of improved health outcomes and program cost efficiencies that a multi-dimensional approach to HIT may afford, MaineCare will realize increased efficiencies related to administrative tasks, allowing for more interaction with and transfer of information to patients, caregivers, and clinical care coordinators and monitoring of patient care, through the coordination of Federal, State and DHHS- specific HIT initiatives.

- **Key Objective**: By 2016, all Federal, State and DHHS-specific HIT initiatives will be intrinsically linked through alignment and coordination of plans and clinical quality measures used to improve health outcomes.

o **Key Activities**:

- Continue to use the collaborative governance structure between the Maine Health Data Organizations All Payer/All Claims data efforts, the OSC, Maine REC, HealthInfoNet, DHHS, and private stakeholders for multi-stakeholder priority-setting and decision making procedures as well as oversight for coordinating operation processes supporting the MaineCare EHR Incentive Program;

- Coordinate all HIT initiatives between health care settings to avoid duplication of efforts and to allow State resources and lessons learned to be used to improve health outcomes;

- Partner with existing EHR adoption and implementation efforts currently underway by providers to coordinate State HIT initiatives, including the administration of the EHR Incentive Program;

- Efficiently use program funding to optimize the benefits of HIT by coordinating and aligning health and quality assurance programs.

Goal 2. Privacy and Security, MaineCare will build public trust and enhance participation in HIT and electronic exchange of protected health information by incorporating privacy and security solutions and appropriate legislation, regulations, and processes in every phase of its development, adoption and use.

- **Key Objective**: By 2016, MaineCare will facilitate electronic exchange, access, and use of electronic protected health information, while maintaining the privacy and security of patient, provider and clearinghouse health information through the advancement of privacy and security legislation, policies, principles, procedures and protections for protected health information that is created, maintained, received or transmitted.

o **Key Activities**:

- Inventory existing privacy and security standards and practices including HIPAA and other Federal and State-specific laws within MaineCare to develop a comprehensive HIPAA and HITECH compliant program.

- Establish administrative, physical and technical privacy and security protections in accordance with industry business best-practices for all protected health information within MaineCare's HIT systems, the State's HIE, and other State systems.

- Collaborate with the OSC to submit adequate protected health information exchange legislation for MaineCare to ensure that health care discrimination does not occur yet allows for integration of all patient care.

Goal 3. Communication, Education and Outreach. MaineCare will aid in transforming the current health care delivery system into a high performing health information exchange system by establishing and implementing robust communication, education, and outreach plans to promote wide-spread EHR and HIT adoption among MaineCare providers and inform Members about the benefits of health information technology.

- **Key Objective**: By 2016, MaineCare will promote the national and State HIT efforts to improve health outcomes through the use of electronic health information tools by developing and implementing comprehensive communication and training programs for State decision makers, staff, providers, citizens of Maine and stakeholders.

  o **Key Activities**:

  - Assist the Regional Extension Center (MeREC) provide technical assistance to aid providers in the use of HIE to help providers change work place culture and work flow processes to promote the adoption of certified EHR technologies.

  - Develop a comprehensive communication strategy and plan to assist providers in understanding the HITECH Act and Meaningful Use requirements so that the benefits of HIT may be realized by coordination with existing Hospital and Provider Association communication channels.

  - Develop training programs for DHHS decision makers, MaineCare management and State staff so that they may educate providers and Members about the benefits of HIT and provide Member education on HIT to empower them to effectively makes decisions about their health information in an informed manner.

Goal 4. Infrastructure and Systems · MaineCare will provide services that are client-centered to improve health outcomes, quality, patient safety, engagement, care coordination, and efficiency of the health care system and reduce operating costs by eliminating duplication of data costs through promoting adoption and Meaningful Use of health information technology.

- **Key Objective**: By 2016, all MaineCare Members will be managed by DHHS and providers who have secure access to health related information within a connected health care system using data and technology standards that enable movement of electronic health information to support patient and population-oriented health care needs.

  o **Key Activities**:

  - Create a single point of entry for providers and use a common identifier to improve access to health information in State systems for the purposes of research, determining patterns of care, and lowering health care costs. This single point of entry will ultimately connect to the HIE. This will be done by creating a

two-way data flow between provider and State systems including, but not limited to, the MIHMS Claims Database; the IMMPACT 2- (Web- based ELR and Immunization) Information System; and the HealthInfoNet – Maine's Health Information Exchange.

- Create a simple, streamlined and automated process for Eligible Professionals and Hospitals to report Meaningful Use criteria (as further defined by CMS), quality measures and obtain EHR incentive payments.   Make available all health information (including mental health, substance abuse, HIV and other protected health information, medications and diagnoses) to all MaineCare Members in an easy to understand manner, including a paper based format for those Members who do not have access to technology.

- Use a common individual identifier (e.g., Master Client Index) technology tools in an integrated manner to allow for continuity of care for individual MaineCare Members and to aid in better understanding of population health including linking Member information across Maine Departments such as Corrections and Educations.

- Remove data silos among State systems for program offices to have access to the data that is collected and managed commonly across DHHS and they need to best serve their Members.

- Coordinate the clinical quality measures gathered by DHHS for the purpose of ensuring that CHIPRA, Meaningful Use, and all other clinical quality measures are coordinated to appropriately address populations with unique needs, such as children.

- Provide patients and families access to their health care data (clinical and administrative) through a member portal using an individual identifier.

- Collect and disburse data in a standardized manner to promote the use of evidence-based protocols by providers when making clinical decisions.

Maine understands that interaction with key stakeholders regarding the administration of the EHR Incentive Program and the HIT vision is not a one-time affair. The successful adoption and implementation of HIT hinges on buy-in and participation from all of the impacted stakeholders-from the Program Directors administering the program, OIT for technology planning and support, the providers adopting the technology and receiving the payments, and the MaineCare Members that are ultimately receiving the benefits of coordination of care and lower health care costs. MaineCare is committed to continued and ongoing collaboration with these stakeholders to revisit the vision for HIT to better meet the needs of its constituents and fully realize the benefits that HIT can afford.

Changes in HIE Strategy

Figure 1: Changes in HIE Strategy:

Legal and Policy: Updates to the Maine Privacy and Security Framework

The State of Maine has continued to make great strides in developing policies and procedures to support HIE. HIN working in collaboration with the State Attorney General and its own private/public Board, has assured that data use agreements, business associate agreements, and vendor contracts with its primary vendors have been executed in a manner that is appropriate, legal, and supports the vision of HIE in the State.

HIN has developed privacy and security policies consistent with federal guidance and specific to Maine State Law, to assure the privacy and security of all patient data being exchanged. These policies were presented to ONC on October 27th, 2010 in Maine's Privacy and Security Framework, currently posted on the Maine OSC website – http://www.maine.gov/HIT. To respond to ONC Program Information Notice ONC-HIE-PIN-003 – "Privacy and Security Framework Requirements and Guidance for the State Health Information Exchange Cooperative Agreement Program, HIN and OSC have developed the following grid based on the template provided by the PIN fro data aggregation architectural model exchange.

Figure 2: Maine Privacy and Security Framework PIN 003 Updates

Domain	*Description of approach and where domain is addressed in policies and practices*	*Description of how stakeholders and the public are made aware of the approach, policies, and practices*	*Description of gap area and process and timeline for addressing*
Individual Access	HIN has plans to bring forward a personal health record portal that will provide patients online access to their information in the HIE.	This new service will be piloted among patients in the Bangor Beacon Community and then expanded statewide. People will be made aware through partnerships with various consumer groups, materials given to them at their provider's office or hospital, HIN's website, social media, and traditional public relations channels such as PSAs and news stories.	HIN is still working on the technical details and polices related to access to the PHR and how to, under Meaningful Use Stage 2, meet requirements to have electronic access to patient information. Currently, the HIN is working with providers to develop a linking system that allows patients to enter into a portal and be able to be linked to all of their providers and their complete health records. It is expected to begin a pilot program for this later in 2013.
Correction	Today if a patient or provider feels a correction is needed, HIN uses the meta data associated with every individual	HIN explains this correction process to all new provider participants during the onboarding process. HIN is currently working to add an	Because patients do not have access to the data, HIN sees very few requests for correction. It is expected that this will increase when the PHR

	result/report to determine the original source of the information. HIN then directs the individual to the originating organization to work through requests for IIHI correction/ modification. Once a modification is made at the source, it's automatically updated in the HIE. HIN plans to include in the PHR a function where patients can easily report a potential error to the data source. If the patient finds an error in their demographic information, they will be able make this change in the portal.	error button on the provider portal to make it easier for our users to report potential errors. In HIN's patient materials and website patients are directed to their provider to discuss potential errors. This will be a major component of the introduction of the PHR, and patients will be made aware of their ability to correct demographic information and dispute medical information in PHR promotional materials.	is launched. The timeline for making the patient correction functionality described is also included in the attached PHR document. While there is clearly a gap in HINs ability and plans "to resolve disputes about information accuracy and document when requests are denied", HIN does not see a clear process that it can sustain to accomplish this. HIN's policies require that resolution of disputes be addressed between the individual and the original source of the data. HIN does not take ownership of the data and therefore cannot change the clinical data contained in the HIE. HIN can help a patient or provider locate the source and work with them to correct the information in their system in a way that also corrects the information in the HIE.
Openness and Transparency	HIN is transparent about what it collects, how that information is used and by whom and why it is disclosed in all patient materials, on its website and in any presentations given to the consumer community. HIN's patient materials and website were written with input from its Consumer Advisory Committee. HIN's materials clearly state the several ways a patient can opt-out of the HIE (or opt back in) and we have an opt-out button on each page of our website, which uses Google Translate for non-English speakers. HIN's materials also explain the process for a patient to request an audit	A new Maine law, passed in 2011, defines standards of practice for informing individuals on what information may exist in the exchange, how it is collected, used or disclosed and how an individual can exercise choice over the release/use of their record. This law requires that all participating providers give the patient an opt-out form the first time that patient visits that provider following HIE connection. HIN's opt out form was approved by the State HIT Coordinator and created with input from those representing providers and patients. Additionally HIN requires that all participants include a statement regarding HIN and its data practices in their Notice of Privacy Practices.	On adhering to the "use of appropriate language(s) and accessibility to people with disabilities, HIN is engaged in translating its current opt out form to support Spanish, French, Arabic and Somali. HIN is working with its consumer committee to address the needs of people living with disabilities who may require additional assistance. Also HIN's communication's policies have been reviewed and approved by MaineCare's communication team.

	of their record which shows them who viewed their record, when and what they looked at.	HIN also helped MaineCare (Maine's Medicaid program) develop a form specific to the reading level of MaineCare members. This form is included in all packages provided to new MaineCare members.	
Individual Choice	HealthInfoNet follows an opt-out policy and patients can opt back in at any time. HIN policies and state law require that patients be given the opportunity to opt-out of the HIE on or before the patient's point of initial contact with each new provider through the presentation of an opt-out form. In addition to choice options, this form describes how their information is used, who has access and why, and their ability to request an audit. Maine State law also prohibits providers from refusing to render care based on the patient's decision to participate or opt-out of the HIE. This is also referenced on the opt-out form. HIN's policies with regard to appropriate access to individual IIHI by providers were developed through the deliberations of both the Consumer Advisory Committee and Technical Professional and Practice Advisory Committee. A provider must formally associate himself/herself with a patient through a "break the glass" process for each	Patients are made aware of their choice options every time they visit a new provider participating with the HIE, when they are presented with the opt-out form. HIN engages each new provider participant in training to familiarize them with the state laws regarding patient notification and help them implement their patient education process. To minimize provider burden, HIN provides all patient education materials and communications support during the onboarding process.	Currently patients can choose to have all information contained in the HIE available to all users or to opt-out and remove all clinical information from the HIE. By adding the personal health record (PHR) solution in 2013, HIN will reevaluate options for expanding individual choices relative to the granularity of what information is exposed within the exchange. Individuals using the PHR may be afforded an expanded range of options based on categories of clinical content that can be effectively managed through an electronic consent process. HealthInfoNet currently does block certain behavioral health and HIV related information and is currently building an opt-in option for patients to choose to expose this information in their record if they want. HIN is working with federal regulators on developing a consent mechanism for Part 2 data.

	instance of access. During this process the provider both establishes the role they have to the patient and attests that the patient is currently under their care and has consented to them accessing IIHI. The break the glass process is audited and this audit report can be generated at any time as described above.		
Collection, Use and Disclosure Limitation	As described above, HIN uses a "break the glass" process to gain the provider's attestation to a treatment relationship with the patient. The HIN dataset was initially defined in 2006 based on the Continuity of Care Record that establishes the minimum data set optimal to support effective transitions of care. This database has been expanded in its scope of content over the past two years but continues to be focused on what enhances care transition between corporately unaligned providers.	The break the glass process is described in all onboarding materials and referenced on patient materials, including the opt-out form. Content is displayed in the portal in distinct categories (labs, documents, image reports etc.…) so that a provider can quickly locate the information they need without searching through the record.	
Data Quality and Integrity	HIN has established a series of policies and procedures that address data protection (encryption), person identification and matching, and data integrity validation during the implementation of connecting a provider organization to the HIE. All data taken into the HIE is mapped to standardized medical terminology	Notification of end users about corrections is treated as an incident. The incident process includes formal written documentation and remediation of the potential impact on the care of individual patients associated with the corrected data.	In 2012, HIN initiated a quarterly process of sampling data for accuracy. Particular attention was paid to areas of content that is converted during the intake process by HIN to address file format or the standardization of local terms to the adopted medical terminology concepts. HIN's review has not uncovered any integrity issues with the data, and plans to continue this process on an ongoing basis.

	concepts (SNOMED CT, ICD-9/10, LOINC, NDC, etc.). Error logs are used to manage content that is received from a provider organization that does not equate with established mapping. Items that error off are manually resolved and validated by HIN staff. HIN has a defined process for identifying usage of individual results/reports that supports timely communication of corrections to users who have accessed a result/report that has been corrected within the exchange. HIN maintains a strong, automated probabilistic algorithm strategy for patient matching. Possible matches that fail to meet at least a 99 percent level of certainty are moved to a work list for manual review and resolution.		
Safeguards	HIN sustains an ongoing, formal risk assessment process. This process includes a standing Risk Assessment Work Group that meets quarterly and a calendar of routine events that identify areas of potential exposure. HIN retains a third party organization to conduct penetration testing twice a year. An annual audit of the exchange's technical infrastructure and software management status is undertaken by a third party organization.		

	The privacy and security policies maintained by HIN are reviewed annually and modified when needed to reflect changes in practice or to address areas of risk defined by the Risk Assessment Work Group. The entire HIN staff participates in the policy review process as part of its bi-weekly staff meetings. IIHI is encrypted by HIN both at rest within the exchange and in motion as it is moved between locations of care. HIN has also separated the database that maintains person identification information from the clinical data set. This separation adds an additional level of security. A web service call routine is used to build a view of a patient "on demand" when an authorized user calls for a patient record within the HIE. HIN uses a strong user authentication process that starts with a formal, written approval to add a user by provider organizations contracting with the exchange. Written policies define how authorization is managed. Users are assigned to one of five roles that define the scope and depth of IHII a user can see within the HIE. The HIE requires authentication and definition of role for every		

	instance that a user accesses a patient record within the exchange. Two-factor authentication is required to support access to the exchange by all end users. In the current institutional connections (hospitals), authorized end users must authenticate against their own network and EMR before they can access the statewide HIE. Connection to the HIE is achieved through point-to-point VPN through dedicated ports with firewalls on each side of the connection. The end user then authenticates against the HIE using a username and password.

HIN recently implemented a second pathway to connection to the HIE for remote "view-only" access. This architecture supports remote connection that satisfies the NIST 800-63 version 1.0.2 Level 3 assurance level. The solution uses "soft" cryptographic tokens in conjunction with a username and password to sustain a secure authentication protocol that supports two-factor authentication. | | |
| **Accountability** | HIN maintains a robust, ongoing audit structure that reviews end user activity on a real time basis. The HIN Security Officer and Chief Operating Officer generate audit reporting weekly for review and sign-off. | Security officers working for provider organizations that maintain a contract with HIN have access to all audit logs within the exchange to support local surveillance and audit review. HIN also supports individual requests for record access audit | |

	Certain areas of audit such as repeat failures to sign in using a valid user name are generated for review at the time an event occurs. At a network level, HIN maintains comprehensive intrusion detection and monitoring structure that includes real time event notification to HIN's technical team and monthly reporting on incidence and nature of attempted access that is not authorized. This monitoring process is incorporated in to the review of the HIN Risk Assessment Work Group.	brought forward by consumers once the consumer has validated their identity either with a notarized request for audit or presentation of a government issued document that includes a picture. HIN maintains a formal policy on notice to individuals of privacy violations and security breaches and its mitigation strategies. These commitments are also incorporated into the Participant Agreement that is maintained between HIN and the provider organizations that connect to the statewide HIE.	

Sustainability

Maine recognizes that sustainability requires integration of all HIT projects and initiatives, such as value-based purchasing and payment reform. As such Maine is embarking on an integrated plan for the OSC role including embedding HIT into initiatives such as Health Homes and Maine's SIM grant. Later this year, the OSC will update this plan to provide further detail on those efforts. Similarly, the Maine OSC is a member of the ONC's sustainable OSC project group which is developing a roadmap for integration of the OSC into the culture of State efforts.
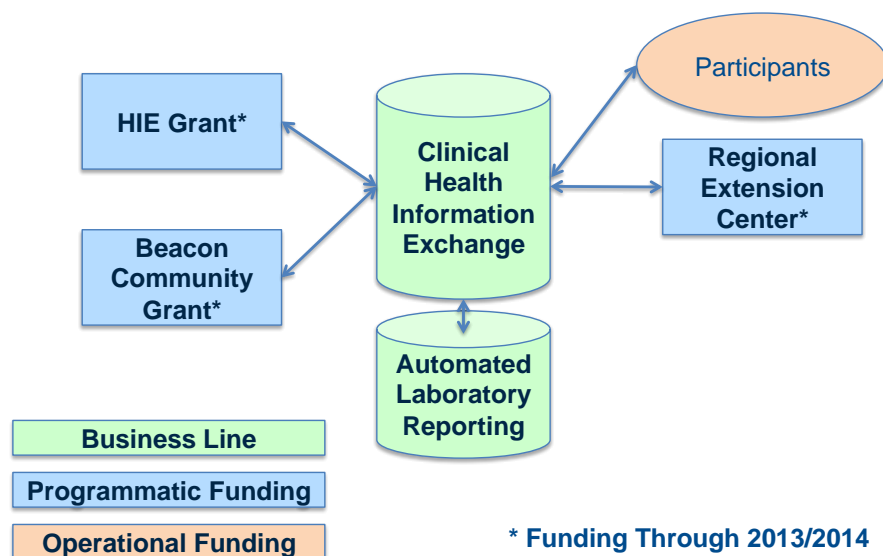
The State of Maine has committed to develop and create the conditions for sustaining it's HIE activities by promoting both public and private demand for services. As the State's designated statewide HIE – HealthInfoNet - was created by a commitment and investment by the provider, government and philanthropic communities, the services of the exchange were and continue to be developed to meet the demand for services in these sectors. In addition, as a result of demonstrating success in deployment as well as data capture and quality, HealthInfoNet has recognized demand coming from the other sectors and sub-sectors that were not originally planned for in the initial rollout. As of May 1, 2013, HealthInfoNet's connectivity status is as follows:

- Query-based Exchange
    - 37 of Maine's 39 Hospitals (an additional 2 are at various stages of implementation)
    - 3 FQHC (2 additional FQHCs are under contract and are at various stages of implementation)

- o 317 Ambulatory Practices
- o 4 Long-Term Care Facilities (Viewing Access with plans for bi-directionality once the minimum data set is defined through partnership with the Beacon Community)
- o 4 Home Health Agencies (Viewing Access through the Bangor Beacon Community)
- o Additionally Under-Contract are 6 Behavioral Health Organizations (with additional organizations planned under Maine's SIM grant approved in early 2013).

- Directed Exchange
  - o Implementation has been done; some work needs to be performed as some E H R vendors have chosen other methods
  - o 100 PCMH providers identified and in various stages of implementation
  - o 2 Specialty Practices (Cardiology and Behavioral Health) targeted for pilot in 2013.
  - o 200 Behavioral Health providers targeted under Maine's SIM grant

- Statistics
  - o 1.6 million individuals (89% of ME population) have a HealthInfoNet record
  - o 90,000 individuals have primary addresses outside of Maine
  - o Less than 2% have opted out
  - o 6,000+ Maine clinicians and care staff can (are authorized to) access the system

- Meaningful Use Statistics for Maine Regional Extension Center
  - o Eligible Providers
    - ▪ Enrolled – Milestone 1: **1,000**
    - ▪ Using Certified EHR, Quality Reports, and eRx – Milestone 2: **722**
    - ▪ Meaningful Use Stage 1, Connected to HIN for Query – Milestone 3: 2**72**
  - o Eligible Critical Access and Rural Hospitals
    - ▪ Enrolled – Milestone 1: **22**
    - ▪ Using Certified EHR, Quality Reports, and eRx – Milestone 2: **18**
    - ▪ Meaningful Use Stage 1, Connecting to HIN for Query, (ELR and immunization) – Milestone 3: 9

The significant progress of HealthInfoNet (HIN) since 2010, the functionality added to the exchange, and the sheer size of the data set being managed by the exchange has resulted in the anticipated increase in demand for connection. This demand is both based on the "if they're in, we should be too" view as well as the statistics that are now available showing the significant cross over of patients between unaligned organizations in the state.

Figure 4: HealthInfoNet Operating Model 2008-2011

Participants

HIE Grant*

Clinical Health Information Exchange

Regional Extension Center*

Beacon Community Grant*

Automated Laboratory Reporting

Business Line

Programmatic Funding

Operational Funding

* Funding Through 2013/2014

This operating model is currently being supported by funding from Participants ($2.6M in 2012) as well as programmatic funds coming from the HIE Cooperative Agreement in accordance with Federal Grant funding and State matching requirements to be met through in-kind contributions of HIN and participating providers of the HIE and the MaineCare HIT program, the Beacon Community Grant, and the Maine Regional Extension Center. However, to sustain the organization and HIE activities it has been recognized by the Board and Executive leadership that new business lines need to be deployed to make up the funding gap between operational funding and expenses in the absence of grant revenue. Many activities have been underway. One critical decision that the HIN Board approved was the pursuit of perpetual licensing for some of the HIE software tools. This has allowed HealthInfoNet to reduce its core operating costs in 2013 significantly over previous years (see figure 5).

While there are many activities that HIN is pursuing, there are three business lines that the HIN Board approved to move forward on during the 2011/2012. The first is a multi-provider statewide vendor-neutral archive (VNA) for images. This VNA activity has been underway for 12 months and included the formation of a statewide workgroup made up of imaging experts from the four largest health systems in the state as well as CIOs and other from across the health care community. This group developed and deployed an RFP and through this process has chosen a final vender to undergo a 6-month, no risk, proof-of-concept (POC) to demonstrate technical feasibility through the end of 2012. All four large health systems and one small hospital are participating in the POC. That success is being measured in 2013, and if successful, HealthInfoNet will be able to bring a highly competitive price point to the marketplace, even after making a margin to support the HIE, that is less than any one system or hospital could receive on the open market for image archiving. In addition, the deployment of this VNA will allow hospitals to disaggregate their picture archiving and communication systems (PACS) vendors from their archive for images, giving hospitals both a better price point and a better bargaining position in the marketplace for PACS vendors. Finally, through HINs partnership with the vendor of choice, the exchange will be able to make images available to any provider accessing the query-based portal via web-service call.

Figure 5: Current and Projected HIN Revenue and Expense through 2014
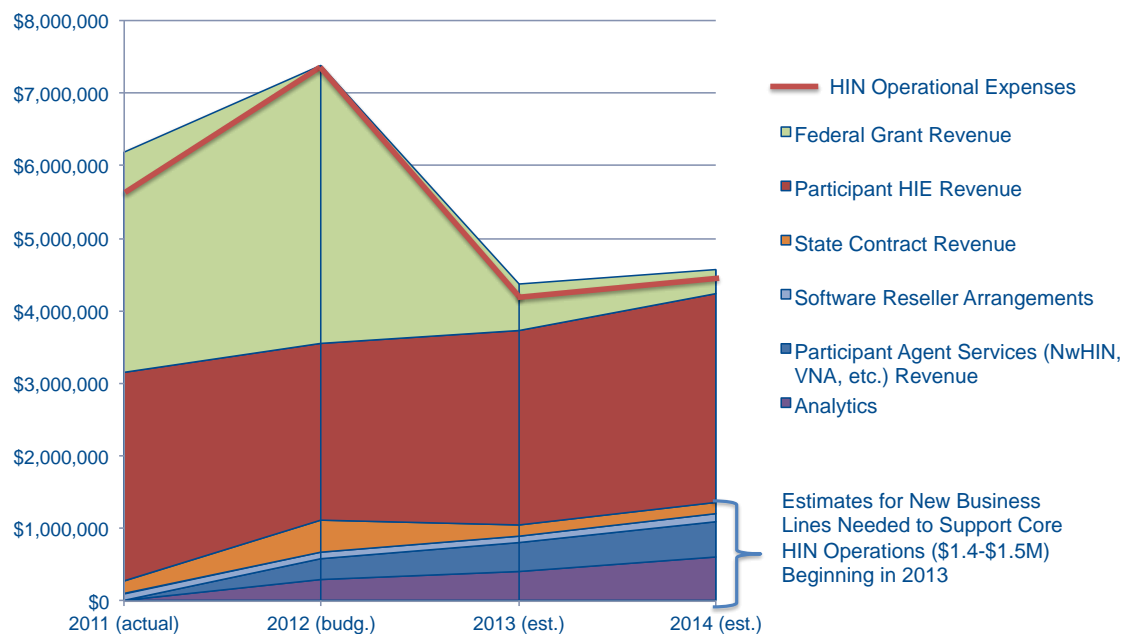
Another market demand that HIN has been working toward is the personal health record (PHR). In 2005 HIN made a commitment to the consumer community that once it reached critical mass of data in the HIE, that it would make the HIE accessible to consumers. And now with Meaningful Use Stage 1 and 2 on the way, both providers and consumers have expressed interest and demand for a HIE-based PHR. Over the past 2 years HIN Executive Leadership have been working with various PHR vendors to assess the technology and scalability of the technologies with the intent to choose a vendor partner that can provide a consumer access-point to the HIE. HIN is currently working with a vendor using probability modeling which has proved very successful in projecting patient needs for health care.

Figure 6: Development, Deployment Plan and Staging for HealthInfoNet PHR 2012/2013

Since May 2012, HIN has continued to work on this project. It is expected that the technological advances that have been made with TCL, PACS, VPN, and advanced E H R capabilities, will further enhance efforts on this front.

HealthInfoNet continues its 2-year Payment Reform Grant from the Maine Health Access foundation in late 2011 to:

- Establish a clinical data warehouse system to support payment reform initiatives leveraging the existing treatment-based health information exchange to address the aggregate data needs of hospitals and provider systems across the State.
- Determine the feasibility of linking clinical data with claims data from the Maine Health Data Organization (MHDO). This has been a long-time commitment by HealthInfoNet and was described in the approved SOP. The linking of the two data sets will build on Maine's leadership in using data to promote better health outcomes.   In early 2013, a successful linking of the two data sets was performed, and HIN and MHDO continue to refine these processes to ensure high quality of exchange of data.
- Develop data access and use policies for the linked data sets. This activity will build on the statewide efforts that developed the MHDO rules for data de-identification and release and will address the needs of the HIE participants regarding the use of clinical data. This effort will be a multi-stakeholder process lead by a steering committee of interested parties. In early 2013, a legislatively mandated work group (LD 1818) issued a report on health data governance and exchange and use policies. This report lays the foundation for continuing policies that also frame the SIM grant efforts to integrate care working to meet the Triple Aim.
- Seek out and implement analytic and predictive modeling tools that can support health reform efforts around the state. An RFP was issued and a vendor selected for a claims data warehouse (under MHDO) and analytic tools that can support the needs of the Maine health systems as payment reform initiatives are implemented. This work will continue through 2013 to build a more robust data platform for which to exchange information.

Since going live on the HIE in 2008, HealthInfoNet partners and stakeholders have been demanding analytics at multiple levels. The Board of Directors of HIN and OSC have described these analytics in three distinct categories:

1. Provider-level: Clinical decision support and chronic disease management for treating clinicians and care managers employed by both health systems and payer/insurers.

2. Organization-level: Alerts and notifications for events (e.g. readmissions), organizational benchmarking and assessments, meaningful use, mandated reporting etc.

3. System-level: Quality analysis and benchmarking, community wide risk grouper development (claims and clinical data), payment reform support, strategic planning etc.

These analytics will be delivered via the existing HIN portal for treatment, new portals developed for different stakeholder access, organizational dashboards, and reports delivered to appropriate individuals and entities. Within the state there has been a long history of using the public-use claims data sets to support these three categories of analytics. As such, there are a

number of organizations in this field, increasing the potential political challenges to HIN in deploying analytical tolls in a competitive environment. In order to mitigate this risk, HIN and OSC have been working with public agencies that may be using these tools such as MaineCare (Medicaid) as well as MECDC, Corrections, and MHDO. In addition, HIN has been working closely with its participating provider organizations to align with their interests. Finally HIN has been in concrete discussions and negotiations with the Northern New England ACO Collaborative (NNEAC), a private partnership between MaineHealth, Eastern Maine Healthcare Systems, Dartmouth College, Dartmouth Medical Center, and Fletcher Allen Healthcare. This group is developing a shared-service ACO support system that will provide ACO analytic and support tools to both the partners and other health stakeholder in the states of Maine, New Hampshire, and Vermont. HealthInfoNet is working with NNEAC to define how it can both provide data and also provide master person and provider identification services leveraging its Master Person Index core system. A grant has been applied for to support these services between 2013 and 2014.

Finally, HIN has been increasingly meeting with and defining business opportunities and projects with payer/insurer organizations in the State of Maine. HIN is working on a project with Maine's largest Medicare Advantage plan to support its data needs for audit of inpatient and outpatient encounters. In addition HIN is in discussions with payers to provide - with provider permission – clinical data from the HIE to care managers employed by payers in order to support their health intervention efforts on behalf of the patient.

Figure 7: HealthInfoNet Expanded Business Lines 2012/2013
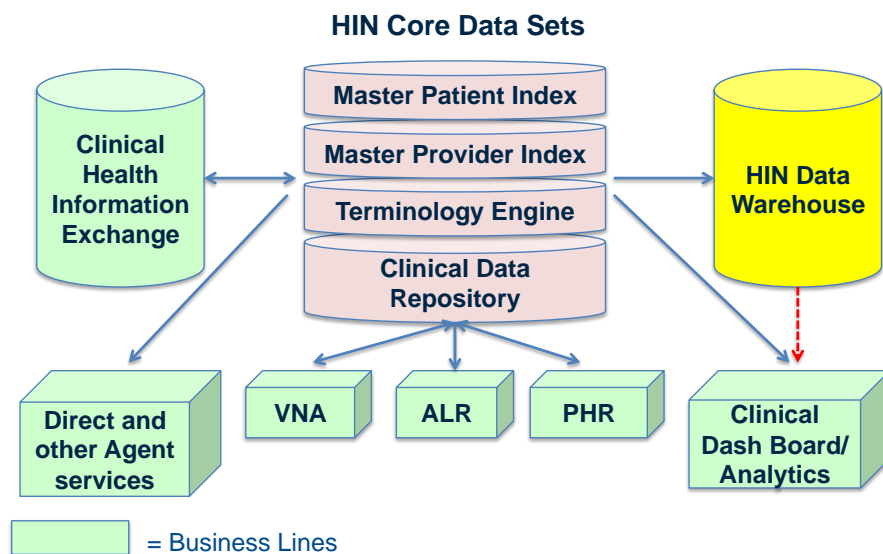
HealthInfoNet has developed a successful subscription fee for it's participating provider organizations in the exchange and is building upon this subscription model for other business lines such as Direct and Analytics. For VNA, this business line is being managed separately from the HIN subscription fees by negotiating a group rate for radiology and cardiology exams archiving (both for migration and new studies). The rates that HIN is proposing are based on a comparison of the current archive costs of the four health systems participating, the HIN negotiated rate with the vendor of choice based on volume of images, and the potential savings

accruing to participating organizations for hardware and CD/Film reductions. HIN will both cover its costs and generate revenue to support the core HIE operation once operational. These rates are still under negotiation and are not able to be shared publicly at this point.

Figure 8: HealthInfoNet Pricing Schedule 2013

HealthInfoNet Hospital Pricing 2013*

Bed Size**	Annual Fee
25 or less	$25,000
26-49	$40,000
50-75	$50,000
76-99	$75,000
100-150	$90,000
151-250	$125,000
251-500	$175,000
501+	$200,000

* These prices represent 2011 HIN pricing estimates. HIN does not guarantee these rates, as they are dependent on HIN operating costs to maintain interfaces.

** Note: For specialty hospitals and other facilities, HIN manages subscription pricing on a per/provider basis at approximately $1,000/provider per year. These prices are negotiable and are also dependent on the complexity of the EMR interface.

HealthInfoNet Ambulatory Provider Pricing*
Interface Development

Size	One Time Fee	
General Mapping and Interface* (Reg. Events, Allergies, Visit Coding (ICD-9/10, CPT), Office Visit Notes, Immunization, Reference Lab, Rx, CCD transfer protocol)		
11+	$10,000	
10 or less	$5,000	
REC	$5,000	
View Only 11+	$2,000	$8K due on begin of bi-directional interface
View Only 10 or less	$1,000	$4K due on begin of bi-directional interface
Custom Mapping**	Time and Materials	
	Time and Materials	
Mapping Updates**		

Annual Fee (Note: MU/Analytics and Direct are Estimated based on Current Provider Demand and Market Analysis)

Providers***	Annual Fee		Comparative Analytics	Direct
10 or less	$600/provider	$200	$240	$120/direct address
11 to 24	$10,000	$3,300.00	$4,000	$144/direct address
25 to 49	$25,000	$8,250.00	$10,000	$144/direct address
50 - 74	$40,000	$13,200.00	$16,000	$144/direct address
75-100	$50,000	$16,500.00	$20,000	$144/direct address
101-125	$75,000	$24,750.00	$30,000	$144/direct address
126-200	$100,000	$33,000.00	$40,000	$144/direct address
200+	$150,000	$49,500.00	$60,000	$144/direct address

* These prices represent 2013 HIN pricing estimates. HIN does not guarantee
these rates, as they are dependent on HIN operating costs to maintain interfaces.
** Some specialty practices will require site specific mapping services (e.g. Pathology)
these services will be provided on a time and materials basis. $175/hr. and $6.00/map code.
Additional maintenance charges may apply for changes subsequent to the interface development.
*** A provider is defined as a MD, DO, NP, or PA with prescribing privileges.

Tracking Progress

The State of Maine continues to track progress on the HIE implementation and use as it relates to the goals set forth in the 2010 SOP and the needs for providers to meet Meaningful use. Below are the statistics for calendar year 2012 and goals projected for Maine for calendar year 2013.

Figure 9: Maine HIE Progress on Required Measures as of May 1, 2012

	Status as of Dec 2011	National Actual 2011	Maine Target Dec 2012/13	National Goal 2012/13
% of pharmacies participating in e-prescribing	96.5%	89.58%	97%	94%
% of labs sending electronic lab results to providers in a structured format	67%	N/A	75%	N/A

% of labs sending electronic lab results to providers using LOINC	67%	N/A	75%	N/A
% of hospitals sharing electronic care summaries with providers outside their system	33%	27%	50%	45%
% of hospitals sharing electronic care summaries with hospitals outside their system	16%	13%	50%	N/A
% of hospitals sharing electronic care summaries with ambulatory providers outside their system	32%	23%	40%	N/A
% of ambulatory providers electronically sharing care summaries with other providers	33%	31%	50%	40%
Public Health agencies receiving ELR data produced by EHRs or other electronic sources in HL7 2.5.1 format with LOINC and SNOMED	YES	N/A	YES	N/A
Immunization registries receiving immunization data produced by EHRs in HL7 2.3.1 or 2.5.1 formats using CVX codes	YES	N/A	YES	N/A
Public Health agencies receiving electronic syndromic surveillance data from hospitals produced by EHRs in HL7 2.3.1 or 2.5.1 formats (using CDC reference guide)	NO (0%)	N/A	NO (0%)	N/A
Public Health agencies receiving electronic syndromic surveillance ambulatory data produced by EHRs in HL7 2.3.1 or 2.5.1	NO (0%)	N/A	NO (0%)	N/A

formats				

With the advent of Meaningful Use Stage 2 in January 2014, the OSC is working with the State's CDC and HIN to develop a mechanism to successfully report specialty registry data directly from providers E H Rs to the State. Maine expects to submit requests for funding under its Meaningful Use Medicaid program for the appropriate allocation of funds for the HIE.

Program Evaluation

Recently, Maine's OSC submitted its program evaluation plan to ONC for approval. We look forward to working with our ONC partners to gaining approval and issuing an RFP for this critical component of the OSC program. The focus of the program will be to look-back and capture success stories, lessons learned, and how to build on sustainability efforts.

State of Maine Office of the State Coordinator for Health Information Technology Program Evaluation Plan

Prepared for:

Office of the National Coordinator for Health Information Technology

Center for Medicare and Medicaid Services

State of Maine Evaluation Lead: Dawn R. Gallagher
June 2013

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1. Introduction

In April 2011, the State of Maine was awarded $3,423,129 by the Office of the National Coordinator for Health Information Technology (ONC)'s State Health Information Exchange Cooperative Agreement Program.[1] The purpose of this award is to develop, implement and facilitate health information technology (HIT) and health information exchange (HIE) in the state of Maine. The Maine program is housed in the Office of the State Coordinator for HIT in the Office of MaineCare Services under the Maine Department of Health and Human Services, which is the sponsor of this program. The program's efforts to advance

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[1] The April 2011 grant award replaced an earlier grant award that established the Health Information Exchange Program in Maine.

HIE are carried out in the context of a Statewide HIT Plan approved by the ONC and State policies and laws. The primary purpose of the program is to support the federal/state partnership HITECH vision:

> *A Nation in which the health and well-being of individuals and communities are improved by health information technology.*

Maine's Office of the State Coordinator for HIT, housed in the Department of health and Human Services leads the State's HIT/HIE efforts and MaineCare's Meaningful Use Program for health care providers. Maine's statewide HIT strategy encompasses the following ideal:

> *Preserving and improving the health of Maine people requires a transformed patient centered health system that uses highly secure, integrated electronic health information systems to advance access, safety, quality, and cost efficiency in the care of individual patients and populations.*

Maine's Department of Health and Human Services has adopted a vision and mission:

> *Vision: Maine people living safe, healthy, and productive lives*
> *Mission: Provide integrated health and human services to the people of Maine to assist individuals in meeting their needs, while respecting the rights and preferences of the individual and family, within available resources.*

Maine's Medicaid Meaningful Use Program, under the Office of the State Coordinator for HIT has a vision that reflects the national and State HIT goals:

> **A Medicaid program that employs secure electronic health information technology to provide truly integrated, efficient, and high quality health care to Members and to improve health outcomes.**

Services performed by the OSC programs facilitate the secure exchange of health information between Maine health care organizations, providers, public health agencies and consumers according to nationally-recognized standards.   Because the Medicaid Meaningful Use program is under the umbrella of the Office of the State Coordinator, it is important to assess both the HIT program and the Meaningful Use program in the context of this evaluation, as they chart the path forward for the future and an updated State Health Plan. Key program milestones for the Office of the State Coordinator for Health Information Technology and the State's Meaningful Use Program are identified in the table below:

Milestone	Date
Contracted services for a statewide HIE	February 2010
Created a Health Information Technology steering committee of providers, consumers, advocacy groups, private entities, government leaders, public agencies and other stakeholders	February 2010
Established framework for Medicaid Adopt, Implement, and Upgrade program and Meaningful Use program (Approval of Maine's SMHP)	June 2010

Implemented the Medicaid Meaningful Use program	June 2011
Conducted annual updates to program strategic plan	May 2011, May 2012
Approved Meaningful Use Implementation Plan Update (IAPD-U)	April 2013 (through September 2015)
Submitted program evaluation plan for approval	June 2013

2. Program Description

The Office of the State Coordinator for Health Information Technology, which has program oversight of the State's Medicaid Meaningful Use program, serves as the foundation for Maine's HIT initiatives. This section provides the evaluation framework describing context, processes and outcomes:

Context	
Priorities *(ONC required and state specific)*	**Inputs** *(primary or key)*
- Laboratories participating in delivering electronic structured laboratory results - Pharmacies participating in electronic prescribing - Providers sharing electronic patient care summaries - Usage of HIE Implementation Metrics - Governance - Technical Infrastructure - Business and Technical Options - Legal / Policy - Finance & Grant Management - Leveraging Funding - Meaningful Use Stage 2 and Stage 3 requirements (when known) - Integration with Payment Reform and Emerging health care initiatives and ONC/CMS priorities and policies - Sustainable Program	*Stakeholder Input (Maine Regional Extension Center, Legislature, HIT Steering Committee, State HIE, OMS Meaningful Use Program, HITSC)* *Strategic and operational plans* *Legislative and executive support* *Federal grant funding* *ONC guidance* *CMS guidance* *Nationally known Quality Programs and Metrics* *Maine DHHS and State Leadership*
Process and Outcomes	
Strategies *(key approaches of program)*	**Outcomes** *(short- and long-term results)*
Active stakeholder engagement *HIE and OSC planning and implementation* *Supporting Laboratories / pharmacies / providers* *Assure privacy and security of information*	*Adoption-related outcomes (priority areas at minimum)* *Cost, quality and health outcomes (e.g., triple aim)* *Sustainability and Governance*

3.   Evaluation Stakeholders

Evaluation stakeholders are individuals or organizations that have a vested interest in the evaluation. Although often referred to as "stakeholders," subgroups of these individuals may actually have very different types of interests in the evaluation performed. The primary stakeholders for this evaluation include:

- Leadership and management of the Office of the State Coordinator for Health Information Technology and the State's Meaningful Use Program
- Maine Legislators and Executives
- Office of the National Coordinator leadership and management
- Individual Consumers and Consumer Groups
- Membership of HITSC (State Agencies, Private and Public Stakeholders, and HealthInfoNet)
- Maine DHHS (leaders of initiatives such as value-based purchasing, SIM, rural health, telemedicine (TCL technology) and health homes)
- Maine CDC
- Maine Health Data Org
- Medicaid Agency
- Broadband Agency
- Maine's IT Office
- Maine's Mental Health Agency
- Maine's Long Term Care Agency
- Maine's CHIPRA Program
- Maine's HIE
- SIM Project and Health Homes Initiative

The evaluation team will work directly with these stakeholders to finalize the evaluation plan by including them in discussions about what information will be most useful to them in taking actions to advance HIE and improve the Office of the State Coordinator for Health Information Technology and the State's Meaningful Use Program, reviewing proposed data collection and analysis methodologies, and developing an approach for the dissemination of findings and recommendations.
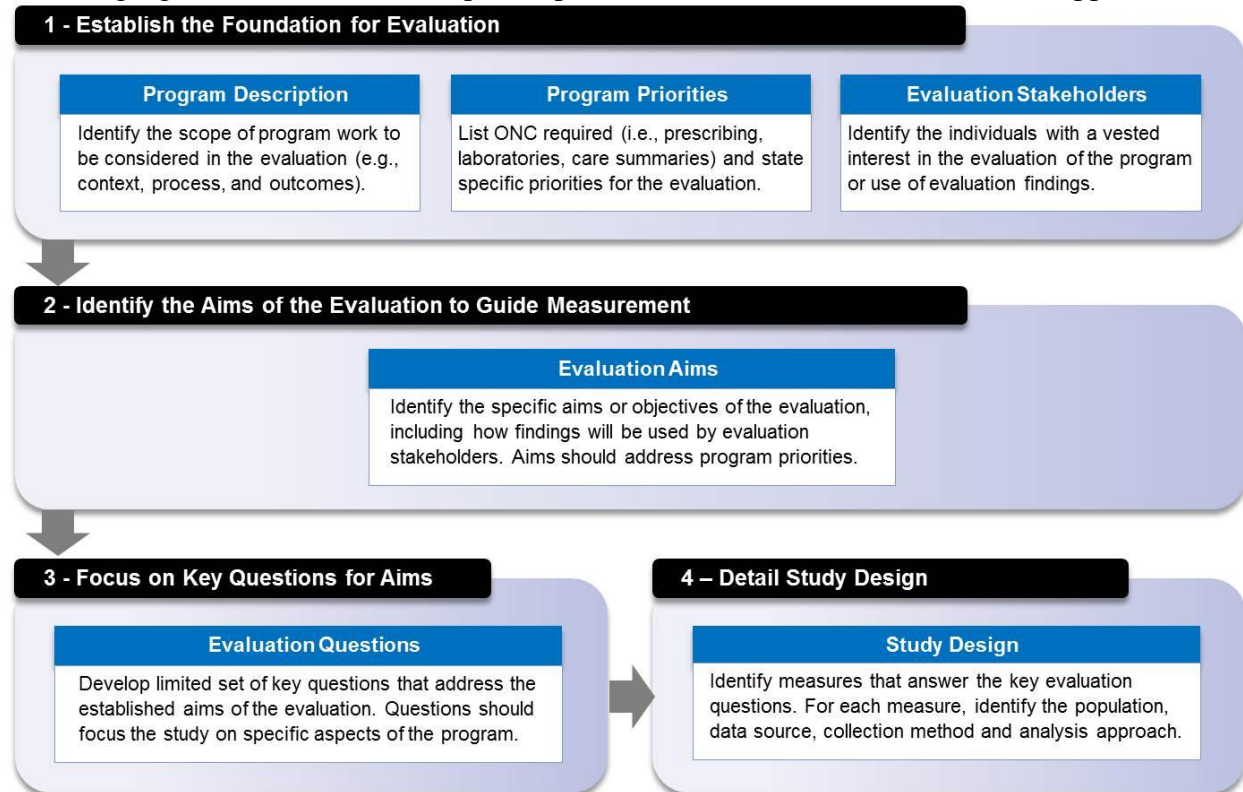
4. *Aims of the Evaluation*

For this activity, evaluation is defined as the collection of information about the context, processes and outcomes of the program to assess the program, improve program effectiveness, and inform programmatic decisions within Maine and by ONC. The primary aims of the evaluation are the following:

- Identify approaches and strategies used to facilitate and expand HIE in priority areas
- Describe conditions influencing implementation of program strategies
- Assess how HIE performance has progressed in key program priority areas
- Assess how key approaches and strategies contributed to progress
- Identify and document lessons learned and gap analysis
- Develop a plan for sustainability with ongoing milestones

5. Overall Approach

To establish a systematic approach for the evaluation plan, we provide a clear explanation of what our evaluation is intended to measure, how evaluation questions align to evaluation aims, and whether evaluation questions provide the information required by key stakeholders. The following figure illustrates these steps and presents an overview of our evaluation approach.

1 - Establish the Foundation for Evaluation

Program Description	Program Priorities	Evaluation Stakeholders
Identify the scope of program work to be considered in the evaluation (e.g., context, process, and outcomes).	List ONC required (i.e., prescribing, laboratories, care summaries) and state specific priorities for the evaluation.	Identify the individuals with a vested interest in the evaluation of the program or use of evaluation findings.

2 - Identify the Aims of the Evaluation to Guide Measurement

Evaluation Aims

Identify the specific aims or objectives of the evaluation, including how findings will be used by evaluation stakeholders. Aims should address program priorities.

3 - Focus on Key Questions for Aims

Evaluation Questions

Develop limited set of key questions that address the established aims of the evaluation. Questions should focus the study on specific aspects of the program.

4 – Detail Study Design

Study Design

Identify measures that answer the key evaluation questions. For each measure, identify the population, data source, collection method and analysis approach.

6. Evaluation Questions

Evaluation questions help to define the boundaries for an evaluation study by specifically delineating the aspects of the program on which the evaluation will focus. The evaluation will use a mixed methods approach to assessing evaluation aims. Evaluation plan questions address both process and outcome components of the program description. The following table identifies evaluation questions for each evaluation aim identified in Section 4. Additional information on data collection and analysis follows.

This evaluation consists of several components: 1) Evaluation of the HIE (to include the Cooperative Agreement executed between the State of Maine and HealthInfoNet that operates the State-wide HIE); 2) Evaluation of the State's OSC and State HIT Plan; and 3) Lessons learned and a road-map for sustaining and integrating HIT in to the framework of policies and practices (Updated HIT Plan).

Focus	Evaluation Question
AIM 1: Identify approaches and strategies that were used to facilitate and expand HIE in priority areas	

Focus	Evaluation Question
Strategies	What approaches and strategies were used to sign up exchange users and how successful were these approaches?
AIM 2: Describe conditions influencing implementation of program strategies	
Governance	To what extent did the governance model for HIE promote or hinder program strategies? What improvements can be made to the governance of the HIE to promote the exchange of clinical data for treatment, payment, and health care operations and a "level playing field"? How are the importance of public purposes and public interest as reflected by the OSC and State HIT Plans, incorporated and reflected in the HIE governance model? What improvements in the OSC and State HIT Plan models best meet the needs of the State for the next four years and beyond?
Survey	To what extent did communications and outreach practices influence key stakeholder engagement? (distinguish between the provider community and the consuming public) How can the State HIT Plan and OSC program better promote coordination of communications and stakeholder engagement among various consumer, advocacy, HIE, and other health care related groups and organizations?
Resources	What are stakeholder perceptions of the adequacy of resources to support HIE implementation, the OSC program, and HIT efforts? What resources are available that have not been leveraged or could be leveraged in a more productive manner? How successful has the State OSC and HIE been in building a framework that readily lends itself to identifying opportunities for grants and other types of funding?
AIM 3: Assess how HIE performance has progressed in key program priority areas	
Adoption	How has HIE performance progressed toward adoption in each of the key program priority areas?
Sustainability	To what extent has progress been demonstrated in the implementation of the sustainability plan?
Utilization	What are the barriers to utilization? Is there a significant difference between HIE adoption and HIE usage? Is HIE participation hampered by lack of technology? The costs of participating in the HIE? How do all consumers who want to have their health care data in the HIE, ensure their health care data is in the HIE, especially those in the rural areas? Are there policies or frameworks that prevent treatment providers, payers, and operations from obtaining clinical data, especially PHI?
AIM 4: Assess how key approaches and strategies contributed to progress and identify lessons learned	
Elements of success	In what ways did program strategies contribute to successful progress in program priorities?
Lessons learned	What lessons has the program learned that are relevant to future efforts to advance the exchange of health information? How can those lessons be applied to the HIE, and the OSC and State HIT Plan going forward?
AIM 5: Assess path to sustainability and Develop Updated State HIT Plan	
Sustainability	How does accumulated knowledge from the evaluation process chart a course for program future, including an updated State HIT Plan? What actions should be taken and included in the updated State HIT Plan in recognition of the further integration of the OSC and the Meaningful Use Program? What are the actions and emerging initiatives that help inform and shape the updated State HIT Plan, and how is HIT best integrated with those initiatives to ensure efficiency, and Triple Aim goals are met?

7. Study Design

To address the established aims of the evaluation and related evaluation questions, multiple data collection and analysis methods will be used. The following table details the primary approach to data collection and analysis. Descriptions of methods for collection and analysis follow.

Evaluation Question	Study Population	Data Source	Data Collection	Data Analysis	
What approaches and strategies were used to sign up exchange users?	• Maine HIE Program	• Program documentation	• Document Review	• Data extraction	• AIM 1
To what extent did the governance model for HIE promote or hinder program strategies?	• Evaluation stakeholders • Key HIE stakeholders	• Sample of stakeholder groups	• Interviews • Focus groups	• Content analysis	• AIM 2
To what extent did communications and outreach practices influence key stakeholder engagement? (distinguish between the provider community and the consuming public)	• Evaluation stakeholders • Key HIE stakeholders	• Sample of stakeholder groups	• Interviews • Focus groups	• Content analysis	• AIM 2
What are stakeholder perceptions of the adequacy of resources to support HIE implementation?	• Evaluation stakeholders • Key HIE stakeholders	• Sample of stakeholder groups	• Questionnaire	• Statistical analysis • Content analysis	• AIM 2
How has HIE performance progressed toward adoption in each of the key program priority areas?	• Laboratories	• Progress reports • Audit log	• Secondary data	• Trend analysis • Statistical analysis	• AIM 3
	• Pharmacies	• Progress reports • Vendor data	• Secondary data		
	• Providers	• Progress reports • Sample of providers	• Secondary data • Questionnaire		
To what extent has progress been demonstrated in the implementation of the sustainability plan?	• Maine HIE Program	• Program documentation	• Document Review	• Content analysis	• AIM 3
Is there a significant difference between HIE adoption and HIE usage?	• Evaluation stakeholders • Key HIE stakeholders	• Sample of stakeholder groups	• Interviews • Focus groups	• Content analysis	• AIM 3
In what ways did program strategies contribute to successful progress in program priorities?	• Evaluation stakeholders • Key HIE stakeholders	• Sample of stakeholder groups	• Interviews • Focus groups	• Content analysis	• AIM 4

Evaluation Question	Study Population	Data Source	Data Collection	Data Analysis	
What lessons, if any, did the program learn that are relevant to future efforts to advance the exchange of health information and HIE?	• Evaluation stakeholders • Key HIE stakeholders	• Sample of stakeholder groups	• Interviews • Focus groups	• Content analysis	• AIM 4
How will those lessons be incorporated into the program strategies, going forward?	• Evaluation stakeholders • Key HIE stakeholders	• Sample of stakeholder groups	• Interviews • Focus groups	• Content analysis	• AIM 4
How does accumulated knowledge from the evaluation process chart a course for program future? (Identify and recommend process and organizational improvements a develop a updated State OSC HIT Plan)	• Evaluation stakeholders • Key HIE stakeholders	• Sample of stakeholder groups	• Interviews • Focus groups • Questionnaire	• Content analysis	• AIM 5
As the Maine framework moves to more fully integrate its OSC and Meaningful Use programs, what actions should be taken to increase efficiency, integrate HIT into new emerging initiatives such as value-based purchasing, SIM, health homes)?	• Evaluation stakeholders • Key HIE stakeholders	• Progress reports • Sample of providers	• Secondary data • Questionnaire • Interviews • Focus groups	• Content analysis	• AIM 5

To select methods, we considered overall appropriateness to the program context (e.g., priorities) and feasibility given program constraints (e.g., resources). Each data collection method is outlined in the table below. Other data collection methods may be utilized as appropriate.

Data Collection Methods

Collection Method	Description
Document Review	The review of existing written documents, reports and other artifacts (e.g., progress reports) to collect data and information for analysis and interpretation.
Secondary Data	The analysis of existing data that was either gathered by another organization or individual or for some other purpose than the evaluation—or both (e.g., Surescripts e-prescribing data).
Interviews	The asking of questions orally to individuals, often in a format with standardized questions and open-ended responses. Closed-ended questions should have specific answers specified.
Focus Groups	A group interview of approximately six to twelve people who share similar characteristics or common interests. A facilitator guides the group based on a predetermined set of topics.
Questionnaires	A questionnaire is a set of questions for gathering information from individuals. Commonly administered as a survey, they may also be administered by mail, telephone, or as handouts.

Data Analysis Methods

Collection Method	Description
Data Extraction	The process of reviewing a data source to retrieve data and information of interest.
Content Analysis	A method for studying the content of a data source (e.g., document, transcript, survey response) to categorize information, often leading to conclusions about common themes, issues, processes or ideas expressed.
Trend Analysis	A method for analyzing the change over time of measures that are collected repeatedly. Trend analysis compares repeated measurements to increase awareness of change.
Statistical Analysis	A set of methods to analyze, present, and interpret data. Statistical analyses provide an approach to describe data and to make interpretations about the meaning of the data.

8. Dissemination of Findings and Recommendations

The evaluation team will determine stakeholders' preferred communication method and their specific needs regarding the format of findings and recommendations resulting from the evaluation. We anticipate developing the following products for the presentation of evaluation findings and recommendations:

- The final evaluation report audience will be the State of Maine Office of the State Coordinator, HITSC, state leaders and federal partners (ONC & CMS)
- A PowerPoint slide set of data and findings linked to sound recommendations for action
- Presentation of findings and recommendations at face-to-face stakeholder meetings
- Presentation of findings and recommendations through public webinar or press release

9. Timeline

The timeline below is based on achieving the evaluation before February 7th, 2014. The completion of evaluation activities depends on the progress of program activities, availability of data and timeliness of feedback from ONC on evaluation activities outlined within this plan.

Evaluation Activity	Completion Date
Approval of Evaluation plan by ONC	June 25, 2013
RFP (Competitive Process)	August 20, 2013
Execute Contract (Including Final Work Plan)	August 30, 2013
Data Gathering (Including Stakeholders Meetings and Input)	October 15, 2013
Data Analysis and Draft Findings	November 15, 2013
Draft Report	December 15, 2013

Comment Period	January 10, 2014
Final Report with Recommendations for Updated State HIT Plan	**January 15, 2014**
Final Presentation of Report to Sponsors	**February 3, 2014**

The state of Maine is committed to securing a well qualified vendor to conduct this important review and analysis of Maine's program with the goal of applying the lessons learned to develop its OSC program goals and objectives and the upcoming next four year plan. Maine will continue to keep its federal partners, the ONC and the Medicaid Meaningful Use programs involved in the development, review, and planning for the next generation of Health Information Technology.